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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/378,502 08/20/99 MCFEELY

F Y0999-198

EXAMINER

IM52/0827

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INTELLECTUAL PROPERTY GROUP
INTERNATIONAL BUSINESS MACHINES CORP
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CHEN, B

ART UNIT

PAPER NUMBER

1762

DATE MAILED:

08/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/378,502

Applicant(s)

Fenton Read McFeely et al.

Examiner

Bret Chen

Art Unit

1762



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 19, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

Claims 1-16 are pending in this application, which is a CPA of 09/378502. The amendment dated 6/11/01, previously unentered, has been entered and considered.

Continued Prosecution Application

1. The request filed on 7/19/01 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/378502 is acceptable and a CPA has been established. An action on the CPA follows.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). On p.1 lines 21-25, the applicant refers to Figure 1 as prior art but on p.9 refers to Figure 1 as the present invention. Clarification and any appropriate amendments are requested.

Claim Rejections - 35 USC § 112

3. Claim 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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In claim 8, the applicant requires the solid precursor to be tungsten hexacarbonyl. This is confusing as the claim is dependent on claim 6 which requires the solid precursor to be one of four materials. Clarification and appropriate amendments are requested. The same issue applies to claim 12.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (5,603,169) or Partus (6,161,398). Kim discloses a bubbler for solid metal-organic precursors which improve the feeding efficiency and the controlling precision of the precursors (col.1 lines 7-11). The carrier gas enters a bottom hole and exits through an upper exhaust hole (col.2 lines 32-43). Partus discloses a method for controlling delivery of a vapor from a bubbler containing a supply of liquid through which a carrier gas is bubbled (col.2 line 64 - col.3 line 8). However, the references fail to teach forming bubbles which agitate and mix.

It is noted that the references clearly teach of forming bubbles. One skilled in the art would reasonably expect that forming bubbles would inherently disrupt the liquid and result in some sort of mixing. Given such a teaching, the skilled artisan would realize that forming more

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bubbles or bigger bubbles (more force) would cause more mixing. it would have been obvious to utilize bubbles to agitate the solution.

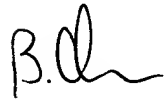
The limitations of claims 2-16 have been addressed above.

Hinkle et al. (5,966,499) and Hayakawa et al. (5,580,822) have been provided for additional information. Neumayer et al. (5,675,028) is deemed relevant art and not provided.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bret Chen whose telephone number is (703) 308-3809. The examiner can normally be reached on Monday through Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached on (703) 308-2333. The fax phone number for this Group is (703) 305-5408. Amendment After Finals should be faxed to (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



bc

August 26, 2001